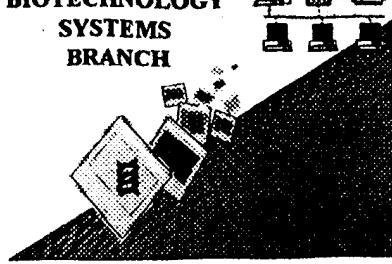


**RAW SEQUENCE LISTING  
ERROR REPORT**

0900 2-07-0  
**BIOTECHNOLOGY  
SYSTEMS  
BRANCH**



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/756,071

Source: O1PE

Date Processed by STIC: 1/25/2001

BEST AVAILABLE COPY

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: [patin2help@uspto.gov](mailto:patin2help@uspto.gov) or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: [patin3help@uspto.gov](mailto:patin3help@uspto.gov) or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER VERSION 3.0 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

**Checker Version 3.0**

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO).

Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

**Checker Version 3.0 can be down loaded from the USPTO website at the following address:**

<http://www.uspto.gov/web/offices/pac/checker>

OIPE

**RAW SEQUENCE LISTING**  
**PATENT APPLICATION: US/09/756,071**

DATE: 01/25/2001  
TIME: 11:31:43

Input Set : A:\ES.txt  
Output Set: N:\CRF3\01252001\I756071.raw

**Does Not Comply  
Corrected Diskette Needed**

**SEQUENCE LISTING**

see  
pp 1, 4, 5, 7, 8

## ERRORRED SEQUENCES

604 (2) INFORMATION FOR SEQ ID NO: 13:  
606 (i) SEQUENCE CHARACTERISTICS:  
607 (A) LENGTH: 1194 amino acids → 1193 (p. 4)  
608 (B) TYPE: amino acid  
609 (D) TOPOLOGY: linear  
611 (ii) MOLECULE TYPE: protein  
613 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:  
615 Met Pro Ala Leu Trp Leu Gly Cys Cys Leu Cys Phe Ser Leu Leu Leu  
616 1 5 10 15  
618 Pro Ala Ala Arg Ala Thr Ser Arg Arg Glu Val Cys Asp Cys Asn Gly

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/756,071

DATE: 01/25/2001  
TIME: 11:31:44

Input Set : A:\ES.txt  
Output Set: N:\CRF3\01252001\I756071.raw

619	20	25	30	
621	Lys Ser Arg Gln Cys Ile Phe Asp Arg Glu Leu His Arg Gln Thr Gly			
622	35	40	45	
624	Asn Gly Phe Arg Cys Leu Asn Cys Asn Asp Asn Thr Asp Gly Ile His			
625	50	55	60	
627	Cys Glu Lys Cys Lys Asn Gly Phe Tyr Arg His Arg Glu Arg Asp Arg			
628	65	70	75	80
630	Cys Leu Pro Cys Asn Cys Asn Ser Lys Gly Ser Leu Ser Ala Arg Cys			
631	85	90	95	
633	Asp Asn Ser Gly Arg Cys Ser Cys Lys Pro Gly Val Thr Gly Ala Arg			
634	100	105	110	
636	Cys Asp Arg Cys Leu Pro Gly Phe His Met Leu Thr Asp Ala Gly Cys			
637	115	120	125	
639	Thr Gln Asp Gln Arg Leu Leu Asp Ser Lys Cys Asp Cys Asp Pro Ala			
640	130	135	140	
642	Gly Ile Ala Gly Pro Cys Asp Ala Gly Arg Cys Val Cys Lys Pro Ala			
643	145	150	155	160
645	Val Thr Gly Glu Arg Cys Asp Arg Cys Arg Ser Gly Tyr Tyr Asn Leu			
646	165	170	175	
648	Asp Gly Gly Asn Pro Glu Gly Cys Thr Gln Cys Phe Cys Tyr Gly His			
649	180	185	190	
651	Ser Ala Ser Cys Arg Ser Ser Ala Glu Tyr Ser Val His Lys Ile Thr			
652	195	200	205	
654	Ser Thr Phe His Gln Asp Val Asp Gly Trp Lys Ala Val Gln Arg Asn			
655	210	215	220	
657	Gly Ser Pro Ala Lys Leu Gln Trp Ser Gln Arg His Gln Asp Val Phe			
658	225	230	235	240
660	Ser Ser Ala Gln Arg Leu Asp Pro Val Tyr Phe Val Ala Pro Ala Lys			
661	245	250	255	
663	Phe Leu Gly Asn Gln Gln Val Ser Tyr Gly Gln Ser Leu Ser Phe Asp			
664	260	265	270	
666	Tyr Arg Val Asp Arg Gly Gly Arg His Pro Ser Ala His Asp Val Ile			
667	275	280	285	
669	Leu Glu Gly Ala Gly Leu Arg Ile Thr Ala Pro Leu Met Pro Leu Gly			
670	290	295	300	
672	Lys Thr Leu Pro Cys Gly Leu Thr Lys Thr Tyr Thr Phe Arg Leu Asn			
673	305	310	315	320
675	Glu His Pro Ser Asn Asn Trp Ser Pro Gln Leu Ser Tyr Phe Glu Tyr			
676	325	330	335	
678	Arg Arg Leu Leu Arg Asn Leu Thr Ala Leu Arg Ile Arg Ala Thr Tyr			
679	340	345	350	
681	Gly Glu Tyr Ser Thr Gly Tyr Ile Asp Asn Val Thr Leu Ile Ser Ala			
682	355	360	365	
684	Arg Pro Val Ser Gly Ala Pro Ala Pro Trp Val Glu Gln Cys Ile Cys			
685	370	375	380	
687	Pro Val Gly Tyr Lys Gly Gln Phe Cys Gln Asp Cys Ala Ser Gly Tyr			
688	385	390	395	400
690	Lys Arg Asp Ser Ala Arg Leu Gly Pro Phe Gly Thr Cys Ile Pro Cys			
691	405	410	415	

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/756,071

DATE: 01/25/2001  
TIME: 11:31:44

Input Set : A:\ES.txt  
Output Set: N:\CRF3\01252001\I756071.raw

693	Asn	Cys	Gln	Gly	Gly	Gly	Ala	Cys	Asp	Pro	Asp	Thr	Gly	Asp	Cys	Tyr	
694				420					425							430	
696	Ser	Gly	Asp	Glu	Asn	Pro	Asp	Ile	Glu	Cys	Ala	Asp	Cys	Pro	Ile	Gly	
697				435					440							445	
699	Phe	Tyr	Asn	Asp	Pro	His	Asp	Pro	Arg	Ser	Cys	Lys	Pro	Cys	Pro	Cys	
700				450					455							460	
702	His	Asn	Gly	Phe	Ser	Cys	Ser	Val	Ile	Pro	Glu	Thr	Glu	Glu	Val	Val	
703	465				470					475						480	
705	Cys	Asn	Asn	Cys	Pro	Pro	Gly	Val	Thr	Gly	Ala	Arg	Cys	Glu	Leu	Cys	
706					485					490						495	
708	Ala	Asp	Gly	Tyr	Phe	Gly	Asp	Pro	Phe	Gly	Glu	His	Gly	Pro	Val	Arg	
709					500					505						510	
711	Pro	Cys	Gln	Pro	Cys	Gln	Cys	Asn	Ser	Asn	Val	Asp	Pro	Ser	Ala	Ser	
712					515					520						525	
714	Gly	Asn	Cys	Asp	Arg	Leu	Thr	Gly	Arg	Cys	Leu	Lys	Cys	Ile	His	Asn	
715					530					535						540	
717	Thr	Ala	Gly	Ile	Tyr	Cys	Asp	Gln	Cys	Lys	Ala	Gly	Tyr	Phe	Gly	Asp	
718	545					550					555						560
720	Pro	Leu	Ala	Pro	Asn	Pro	Ala	Asp	Lys	Cys	Arg	Ala	Cys	Asn	Cys	Asn	
721						565				570						575	
723	Pro	Met	Gly	Ser	Glu	Pro	Val	Gly	Cys	Arg	Ser	Asp	Gly	Thr	Cys	Val	
724					580					585						590	
726	Cys	Lys	Pro	Gly	Phe	Gly	Gly	Pro	Asn	Cys	Glu	His	Gly	Ala	Phe	Ser	
727					595					600						605	
729	Cys	Pro	Ala	Cys	Tyr	Asn	Gln	Val	Lys	Ile	Gln	Met	Asp	Gln	Phe	Met	
730					610				615							620	
732	Gln	Gln	Leu	Gln	Arg	Met	Glu	Ala	Leu	Ile	Ser	Lys	Ala	Gln	Gly	Gly	
733	625					630					635						640
735	Asp	Gly	Val	Val	Pro	Asp	Thr	Glu	Leu	Glu	Gly	Arg	Met	Gln	Gln	Ala	
736						645				650						655	
738	Glu	Gln	Ala	Leu	Gln	Asp	Ile	Leu	Arg	Asp	Ala	Gln	Ile	Ser	Glu	Gly	
739						660				665						670	
741	Ala	Ser	Arg	Ser	Leu	Gly	Leu	Gln	Leu	Ala	Lys	Val	Arg	Ser	Gln	Glu	
742					675				680							685	
744	Asn	Ser	Tyr	Gln	Ser	Arg	Leu	Asp	Asp	Leu	Lys	Met	Thr	Val	Glu	Arg	
745					690				695							700	
747	Val	Arg	Ala	Leu	Gly	Ser	Gln	Tyr	Gln	Asn	Arg	Val	Arg	Asp	Thr	His	
748	705					710				715						720	
750	Arg	Leu	Ile	Thr	Gln	Met	Gln	Leu	Ser	Leu	Ala	Glu	Ser	Glu	Ala	Ser	
751						725				730						735	
753	Leu	Gly	Asn	Thr	Asn	Ile	Pro	Ala	Ser	Asp	His	Tyr	Val	Gly	Pro	Asn	
754						740				745						750	
756	Gly	Phe	Lys	Ser	Leu	Ala	Gln	Glu	Ala	Thr	Arg	Leu	Ala	Glu	Ser	His	
757						755				760						765	
759	Val	Glu	Ser	Ala	Ser	Asn	Met	Glu	Gln	Leu	Thr	Arg	Glu	Thr	Glu	Asp	
760						770				775						780	
762	Tyr	Ser	Lys	Gln	Ala	Leu	Ser	Leu	Val	Arg	Lys	Ala	Leu	His	Glu	Gly	
763	785					790					795						800
765	Val	Gly	Ser	Gly	Ser	Pro	Asp	Gly	Ala	Val	Val	Gln	Gly	Leu			

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/756,071

DATE: 01/25/2001  
TIME: 11:31:44

Input Set : A:\ES.txt  
Output Set: N:\CRF3\01252001\I756071.raw

766	805	810	815
768 Val	Glu Lys Leu	Glu Lys Thr Lys Ser	Leu Ala Gln Gln
769	820	825	830
771 Glu Ala	Thr Gln Ala	Glu Ile Glu Ala Asp Arg	Ser Tyr Gln His Ser
772	835	840	845
774 Leu Arg	Leu Leu Asp Ser	Val Ser Pro Leu Gln Gly	Val Ser Asp Gln
775	850	855	860
777 Ser Phe	Gln Val Glu Ala Lys Arg	Ile Lys Gln Lys Ala Asp	Ser
778	865	870	875
780 Leu Ser	Ser Leu Val Thr Arg	His Met Asp Glu Phe Lys	Arg Thr Gln
781	885	890	895
783 Lys Asn	Leu Gly Asn Trp	Lys Glu Ala Gln Gln	Leu Leu Gln Asn
784	900	905	910
786 Gly Lys	Ser Gly Arg	Glu Lys Ser Asp Gln	Leu Ser Arg Ala Asn
787	915	920	925
789 Leu Ala	Lys Ser Arg Ala	Gln Glu Ala Leu Ser	Met Gly Asn Ala Thr
790	930	935	940
792 Phe Tyr	Glu Val Glu Ser	Ile Leu Lys Asn	Leu Arg Glu Phe Asp
793	945	950	955
795 Gln Val	Asp Asn Arg	Lys Ala Glu Ala Glu	Glu Ala Met Lys Arg
796	965	970	975
798 Ser Tyr	Ile Ser Gln Lys Val	Ser Asp Ala Ser Asp	Lys Thr Gln Gln
799	980	985	990
801 Ala Glu	Arg Ala Leu Gly	Ser Ala Ala Ala Asp	Ala Gln Arg Ala Lys
802	995	1000	1005
804 Asn Gly	Ala Gly Glu Ala	Leu Glu Ile Ser Ser	Glu Ile Glu Gln Glu
805	1010	1015	1020
807 Ile Gly	Ser Leu Asn Leu	Glu Ala Asn Val	Thr Ala Asp Gly
808	1025	1030	1035
810 Ala Met	Glu Lys Gly	Leu Ala Ser Leu	Lys Ser Glu Met Arg
811	1045	1050	1055
813 Glu Gly	Glu Leu Glu Arg	Lys Glu Leu Glu Phe Asp	Thr Asn Met Asp
814	1060	1065	1070
816 Ala Val	Gln Met Val	Ile Thr Glu Ala Gln	Lys Val Asp Thr Arg
817	1075	1080	1085
819 Lys Asn	Ala Gly Val Thr	Ile Gln Asp Thr	Leu Asn Thr Leu Asp
820	1090	1095	1100
822 Leu Leu	His Leu Met Asp	Gln Pro Leu Ser Val	Asp Glu Glu Gly
823	1105	1110	1115
825 Val Leu	Leu Glu Gln	Lys Leu Ser Arg	Ala Lys Thr Gln Ile
826	1125	1130	1135
828 Gln Leu	Arg Pro Met	Met Ser Glu Leu Glu	Glu Arg Ala Arg Gln Gln
829	1140	1145	1150
831 Arg Gly	His Leu His	Leu Glu Thr Ser Ile	Asp Gly Ile Leu Ala
832	1155	1160	1165
834 Asp Val	Lys Asn Leu	Glu Asn Ile Arg Asp	Asn Leu Pro Pro Gly Cys
835	1170	1175	1180
E--> 837 Tyr Asn	Thr Gln Ala	Leu Glu Gln	*
838	1185	1190	

*delete ending stop codon  
and adjust (A) LENGTH: response*

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/756,071

DATE: 01/25/2001  
TIME: 11:31:44

Input Set : A:\ES.txt  
Output Set: N:\CRF3\01252001\I756071.raw

1185 (2) INFORMATION FOR SEQ ID NO: 15:  
 1187 (i) SEQUENCE CHARACTERISTICS:  
 1188 (A) LENGTH: 1112 amino acids )/ / / / (p.7)  
 1189 (B) TYPE: amino acid  
 1190 (D) TOPOLOGY: linear  
 1192 (ii) MOLECULE TYPE: protein  
 1194 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:  
 1196 Met Pro Ala Leu Trp Leu Gly Cys Cys Leu Cys Phe Ser Leu Leu Leu  
 1197 1 5 10 15  
 1199 Pro Ala Ala Arg Ala Thr Ser Arg Arg Glu Val Cys Asp Cys Asn Gly  
 1200 20 25 30  
 1202 Lys Ser Arg Gln Cys Ile Phe Asp Arg Glu Leu His Arg Gln Thr Gly  
 1203 35 40 45  
 1205 Asn Gly Phe Arg Cys Leu Asn Cys Asn Asp Asn Thr Asp Gly Ile His  
 1206 50 55 60  
 1208 Cys Glu Lys Cys Lys Asn Gly Phe Tyr Arg His Arg Glu Arg Asp Arg  
 1209 65 70 75 80  
 1211 Cys Leu Pro Cys Asn Cys Asn Ser Lys Gly Ser Leu Ser Ala Arg Cys  
 1212 85 90 95  
 1214 Asp Asn Ser Gly Arg Cys Ser Cys Lys Pro Gly Val Thr Gly Ala Arg  
 1215 100 105 110  
 1217 Cys Asp Arg Cys Leu Pro Gly Phe His Met Leu Thr Asp Ala Gly Cys  
 1218 115 120 125  
 1220 Thr Gln Asp Gln Arg Leu Leu Asp Ser Lys Cys Asp Cys Asp Pro Ala  
 1221 130 135 140  
 1223 Gly Ile Ala Gly Pro Cys Asp Ala Gly Arg Cys Val Cys Lys Pro Ala  
 1224 145 150 155 160  
 1226 Val Thr Gly Glu Arg Cys Asp Arg Cys Arg Ser Gly Tyr Tyr Asn Leu  
 1227 165 170 175  
 1229 Asp Gly Gly Asn Pro Glu Gly Cys Thr Gln Cys Phe Cys Tyr Gly His  
 1230 180 185 190  
 1232 Ser Ala Ser Cys Arg Ser Ser Ala Glu Tyr Ser Val His Lys Ile Thr  
 1233 195 200 205  
 1235 Ser Thr Phe His Gln Asp Val Asp Gly Trp Lys Ala Val Gln Arg Asn  
 1236 210 215 220  
 1238 Gly Ser Pro Ala Lys Leu Gln Trp Ser Gln Arg His Gln Asp Val Phe  
 1239 225 230 235 240  
 1241 Ser Ser Ala Gln Arg Leu Asp Pro Val Tyr Phe Val Ala Pro Ala Lys  
 1242 245 250 255  
 1244 Phe Leu Gly Asn Gln Gln Val Ser Tyr Gly Gln Ser Leu Ser Phe Asp  
 1245 260 265 270  
 1247 Tyr Arg Val Asp Arg Gly Gly Arg His Pro Ser Ala His Asp Val Ile  
 1248 275 280 285  
 1250 Leu Glu Gly Ala Gly Leu Arg Ile Thr Ala Pro Leu Met Pro Leu Gly  
 1251 290 295 300  
 1253 Lys Thr Leu Pro Cys Gly Leu Thr Lys Thr Tyr Thr Phe Arg Leu Asn  
 1254 305 310 315 320  
 1256 Glu His Pro Ser Asn Asn Trp Ser Pro Gln Leu Ser Tyr Phe Glu Tyr  
 1257 325 330 335

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/756,071

DATE: 01/25/2001  
TIME: 11:31:44

Input Set : A:\ES.txt  
Output Set: N:\CRF3\01252001\I756071.raw

1259 Arg Arg Leu Leu Arg Asn Leu Thr Ala Leu Arg Ile Arg Ala Thr Tyr  
 1260 340 345 350  
 1262 Gly Glu Tyr Ser Thr Gly Tyr Ile Asp Asn Val Thr Leu Ile Ser Ala  
 1263 355 360 365  
 1265 Arg Pro Val Ser Gly Ala Pro Ala Pro Trp Val Glu Gln Cys Ile Cys  
 1266 370 375 380  
 1268 Pro Val Gly Tyr Lys Gly Gln Phe Cys Gln Asp Cys Ala Ser Gly Tyr  
 1269 385 390 395 400  
 1271 Lys Arg Asp Ser Ala Arg Leu Gly Pro Phe Gly Thr Cys Ile Pro Cys  
 1272 405 410 415  
 1274 Asn Cys Gln Gly Gly Ala Cys Asp Pro Asp Thr Gly Asp Cys Tyr  
 1275 420 425 430  
 1277 Ser Gly Asp Glu Asn Pro Asp Ile Glu Cys Ala Asp Cys Pro Ile Gly  
 1278 435 440 445  
 1280 Phe Tyr Asn Asp Pro His Asp Pro Arg Ser Cys Lys Pro Cys Pro Cys  
 1281 450 455 460  
 1283 His Asn Gly Phe Ser Cys Ser Val Ile Pro Glu Thr Glu Glu Val Val  
 1284 465 470 475 480  
 1286 Cys Asn Asn Cys Pro Pro Gly Val Thr Gly Ala Arg Cys Glu Leu Cys  
 1287 485 490 495  
 1289 Ala Asp Gly Tyr Phe Gly Asp Pro Phe Gly Glu His Gly Pro Val Arg  
 1290 500 505 510  
 1292 Pro Cys Gln Pro Cys Gln Cys Asn Ser Asn Val Asp Pro Ser Ala Ser  
 1293 515 520 525  
 1295 Gly Asn Cys Asp Arg Leu Thr Gly Arg Cys Leu Lys Cys Ile His Asn  
 1296 530 535 540  
 1298 Thr Ala Gly Ile Tyr Cys Asp Gln Cys Lys Ala Gly Tyr Phe Gly Asp  
 1299 545 550 555 560  
 1301 Pro Leu Ala Pro Asn Pro Ala Asp Lys Cys Arg Ala Cys Asn Cys Asn  
 1302 565 570 575  
 1304 Pro Met Gly Ser Glu Pro Val Gly Cys Arg Ser Asp Gly Thr Cys Val  
 1305 580 585 590  
 1307 Cys Lys Pro Gly Phe Gly Pro Asn Cys Glu His Gly Ala Phe Ser  
 1308 595 600 605  
 1310 Cys Pro Ala Cys Tyr Asn Gln Val Lys Ile Gln Met Asp Gln Phe Met  
 1311 610 615 620  
 1313 Gln Gln Leu Gln Arg Met Glu Ala Leu Ile Ser Lys Ala Gln Gly Gly  
 1314 625 630 635 640  
 1316 Asp Gly Val Val Pro Asp Thr Glu Leu Glu Gly Arg Met Gln Gln Ala  
 1317 645 650 655  
 1319 Glu Gln Ala Leu Gln Asp Ile Leu Arg Asp Ala Gln Ile Ser Glu Gly  
 1320 660 665 670  
 1322 Ala Ser Arg Ser Leu Gly Leu Gln Leu Ala Lys Val Arg Ser Gln Glu  
 1323 675 680 685  
 1325 Asn Ser Tyr Gln Ser Arg Leu Asp Asp Leu Lys Met Thr Val Glu Arg  
 1326 690 695 700  
 1328 Val Arg Ala Leu Gly Ser Gln Tyr Gln Asn Arg Val Arg Asp Thr His  
 1329 705 710 715 720  
 1331 Arg Leu Ile Thr Gln Met Gln Leu Ser Leu Ala Glu Ser Glu Ala Ser

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/756,071

DATE: 01/25/2001  
TIME: 11:31:44

Input Set : A:\ES.txt  
Output Set: N:\CRF3\01252001\I756071.raw

1332	725	730	735
1334	Leu Gly Asn Thr Asn Ile Pro Ala Ser Asp His Tyr Val Gly Pro Asn		
1335	740	745	750
1337	Gly Phe Lys Ser Leu Ala Gln Glu Ala Thr Arg Leu Ala Glu Ser His		
1338	755	760	765
1340	Val Glu Ser Ala Ser Asn Met Glu Gln Leu Thr Arg Glu Thr Glu Asp		
1341	770	775	780
1343	Tyr Ser Lys Gln Ala Leu Ser Leu Val Arg Lys Ala Leu His Glu Gly		
1344	785	790	795
1346	800	805	810
1347	Val Gly Ser Gly Ser Pro Asp Gly Ala Val Val Gln Gly Leu		
1349	815	820	825
1350	Val Glu Lys Leu Glu Lys Thr Lys Ser Leu Ala Gln Gln Leu Thr Arg		
1352	830	835	840
1353	Glu Ala Thr Gln Ala Glu Ile Glu Ala Asp Arg Ser Tyr Gln His Ser		
1355	845	850	855
1356	860	865	870
1358	Ser Phe Gln Val Glu Glu Ala Lys Arg Ile Lys Gln Lys Ala Asp Ser		
1359	880	885	890
1361	Leu Ser Ser Leu Val Thr Arg His Met Asp Glu Phe Lys Arg Thr Gln		
1362	895	900	905
1364	910	915	920
1365	Lys Asn Leu Gly Asn Trp Lys Glu Glu Ala Gln Gln Leu Leu Gln Asn		
1367	925	930	935
1368	Leu Ala Lys Ser Arg Ala Gln Glu Ala Leu Ser Met Gly Asn Ala Thr		
1370	940	945	950
1373	Phe Tyr Glu Val Glu Ser Ile Leu Lys Asn Leu Arg Glu Phe Asp Leu		
1374	955	960	965
1376	Gln Val Asp Asn Arg Lys Ala Glu Ala Glu Glu Ala Met Lys Arg Leu		
1377	975	980	985
1379	Ser Tyr Ile Ser Gln Lys Val Ser Asp Ala Ser Asp Lys Thr Gln Gln		
1380	990	995	1000
1382	1005	1010	1015
1383	Ala Glu Arg Ala Leu Gly Ser Ala Ala Ala Asp Ala Gln Arg Ala Lys		
1385	1020	1025	1030
1386	Asn Gly Ala Gly Glu Ala Leu Glu Ile Ser Ser Glu Ile Glu Gln Glu		
1388	1040	1045	1050
1389	Ile Gly Ser Leu Asn Leu Glu Ala Asn Val Thr Ala Asp Gly Ala Leu		
1391	1055	1060	1065
1392	Ala Met Glu Lys Gly Leu Ala Ser Leu Lys Ser Glu Met Arg Glu Val		
1394	1070	1075	1080
1395	Glu Gly Glu Leu Glu Arg Lys Glu Leu Glu Phe Asp Thr Asn Met Asp		
1397	1085	1090	1095
1400	Ala Val Gln Met Val Ile Thr Glu Ala Gln Lys Val Asp Thr Arg Ala		
1401	1100	1105	1110
E--> 1403	Leu Leu His Leu Met Gly Met *		

E--> 1403 Leu Leu His Leu Met Gly Met \*

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/756,071

DATE: 01/25/2001  
TIME: 11:31:44

Input Set : A:\ES.txt  
Output Set: N:\CRF3\01252001\I756071.raw

1472 (2) INFORMATION FOR SEQ ID NO: 20:  
 1474     (i) SEQUENCE CHARACTERISTICS:  
 1475         (A) LENGTH: 720 base pairs → amino acid  
 1476         (B) TYPE: nucleic acid → amino acid  
 1477         (C) STRANDEDNESS: single  
 1478         (D) TOPOLOGY: linear  
 1480     (ii) MOLECULE TYPE: other nucleic acid →  
 1481         (A) DESCRIPTION: /desc = "OLIGOMER PRIMER"  
 1483     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:  
 1485 Ala Gly Thr Cys Thr Thr Ala Thr Ala Gly Gly Ala Gly Gly  
 1486 1                 5                 10                 15  
 1488 Thr Thr Gly Gly Cys Cys Ala Gly Thr Cys Ala Ala Thr Ala Gly Gly  
 1489                 20                 25                 30  
 1491 Thr Thr Ala Cys Thr Thr Ala Thr Gly Ala Gly Thr Thr Gly Cys  
 1492                 35                 40                 45  
 1494 Thr Ala Ala Cys Cys Cys Thr Gly Gly Thr Gly Ala Gly Cys Ala Gly  
 1495                 50                 55                 60  
 1497 Gly Ala Ala Gly Thr Thr Ala Thr Gly Thr Gly Ala Cys Cys Ala  
 1498                 65                 70                 75                 80  
 1500 Gly Gly Ala Gly Ala Gly Ala Ala Ala Cys Cys Cys Thr Thr Gly Gly  
 1501                 85                 90                 95  
 1503 Thr Thr Cys Ala Gly Cys Cys Thr Gly Gly Ala Gly Ala Ala Ala Gly  
 1504                 100                 105                 110  
 1506 Gly Ala Gly Ala Gly Thr Thr Gly Ala Cys Cys Cys Thr Ala Ala  
 1507                 115                 120                 125  
 1509 Ala Cys Thr Gly Gly Ala Gly Gly Thr Gly Gly Ala Gly Ala Gly  
 1510                 130                 135                 140  
 1512 Gly Ala Cys Cys Cys Thr Gly Thr Thr Gly Thr Gly Ala Cys Thr Cys  
 1513                 145                 150                 155                 160  
 1515 Thr Cys Cys Gly Ala Cys Thr Gly Ala Cys Thr Thr Gly Thr Cys Thr  
 1516                 165                 170                 175  
 1518 Thr Cys Cys Thr Thr Gly Ala Thr Gly Thr Cys Cys Thr Thr Ala  
 1519                 180                 185                 190  
 1521 Ala Gly Cys Cys Gly Gly Ala Gly Cys Thr Gly Ala Thr Thr Cys Gly  
 1522                 195                 200                 205  
 1524 Gly Gly Cys Thr Gly Cys Thr Gly Cys Cys Thr Thr Ala Thr Thr Thr  
 1525                 210                 215                 220  
 1527 Cys Thr Gly Ala Gly Thr Thr Ala Gly Cys Gly Cys Thr Cys Thr  
 1528                 225                 230                 235                 240  
 1530 Ala Ala Gly Ala Thr Thr Gly Gly Cys Cys Thr Cys Cys Cys Ala  
 1531                 245                 250                 255  
 1533 Gly Thr Thr Thr Gly Ala Gly Gly Ala Ala Gly Gly Gly Cys Gly  
 1534                 260                 265                 270  
 1536 Gly Gly Cys Thr Gly Cys Thr Gly Thr Cys Thr Ala Cys Cys Thr Cys  
 1537                 275                 280                 285  
 1539 Thr Gly Thr Gly Ala Ala Thr Cys Thr Gly Cys Cys Cys Thr Gly Gly  
 1540                 290                 295                 300  
 1542 Ala Cys Cys Ala Cys Cys Cys Cys Gly Gly Ala Gly Ala Gly Ala  
 1543                 305                 310                 315                 320

This is not  
a nucleotide  
sequence.

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/756,071

DATE: 01/25/2001  
TIME: 11:31:44

Input Set : A:\ES.txt  
Output Set: N:\CRF3\01252001\I756071.raw

1545 Ala Gly Gly Ala Gly Gly Cys Thr Cys Cys Gly Gly Gly Ala  
1546 325 330 335  
1548 Ala Thr Cys Thr Cys Gly Cys Ala Cys Ala Thr Thr Cys Cys Ala Gly  
1549 340 345 350  
1551 Gly Cys Ala Ala Ala Gly Gly Cys Thr Cys Cys Gly Gly Gly Cys  
1552 355 360 365  
1554 Cys Gly Cys Ala Gly Cys Cys Thr Cys Thr Gly Thr Gly Cys Cys Ala  
1555 370 375 380  
1557 Cys Ala Cys Cys Cys Thr Thr Gly Gly Cys Cys Gly Gly Gly Cys  
1558 385 390 395 400  
1560 Cys Ala Gly Gly Thr Gly Thr Gly Cys Gly Cys Cys Cys Thr Cys Cys  
1561 405 410 415  
1563 Thr Cys Gly Cys Thr Gly Cys Gly Ala Gly Gly Gly Gly Ala Gly  
1564 420 425 430  
1566 Cys Gly Gly Cys Gly Cys Thr Gly Cys Gly Gly Gly Gly Ala  
1567 435 440 445  
1569 Gly Cys Gly Ala Thr Thr Thr Cys Cys Ala Gly Cys Cys Cys Gly  
1570 450 455 460  
1572 Gly Thr Thr Thr Gly Thr Gly Cys Thr Cys Thr Gly Thr Gly Thr Gly  
1573 465 470 475 480  
1575 Thr Thr Thr Gly Thr Cys Thr Gly Cys Cys Thr Cys Thr Gly Gly Ala  
1576 485 490 495  
1578 Gly Gly Gly Cys Thr Gly Gly Thr Cys Cys Thr Cys Cys Thr Thr  
1579 500 505 510  
1581 Ala Thr Thr Cys Ala Cys Ala Gly Gly Thr Gly Ala Gly Thr Cys Ala  
1582 515 520 525  
1584 Cys Ala Cys Cys Cys Thr Gly Ala Ala Cys Ala Cys Ala Gly Gly  
1585 530 535 540  
1587 Cys Thr Cys Thr Cys Thr Cys Cys Thr Gly Thr Cys Ala Gly Gly  
1588 545 550 555 560  
1590 Ala Cys Thr Gly Ala Gly Thr Cys Ala Gly Gly Thr Ala Gly Ala Ala  
1591 565 570 575  
1593 Gly Ala Gly Thr Cys Gly Ala Thr Ala Ala Ala Cys Cys Ala Cys  
1594 580 585 590  
1596 Cys Thr Gly Ala Thr Cys Ala Ala Gly Gly Ala Ala Ala Gly Gly  
1597 595 600 605  
1599 Ala Ala Gly Gly Cys Ala Cys Ala Gly Cys Gly Gly Ala Gly Cys Gly  
1600 610 615 620  
1602 Cys Ala Gly Ala Gly Thr Gly Ala Gly Ala Ala Cys Cys Ala Cys Cys  
1603 625 630 635 640  
1605 Ala Ala Cys Cys Gly Ala Gly Gly Cys Gly Cys Gly Gly Gly Cys  
1606 645 650 655  
1608 Ala Gly Cys Gly Ala Cys Cys Cys Thr Gly Cys Ala Gly Cys Gly  
1609 660 665 670  
1611 Gly Ala Gly Ala Cys Ala Gly Ala Gly Ala Cys Thr Gly Ala Gly Cys  
1612 675 680 685  
1614 Gly Gly Cys Cys Cys Gly Gly Cys Ala Cys Cys Gly Cys Cys Ala Thr  
1615 690 695 700  
1617 Gly Cys Cys Thr Gly Cys Cys Thr Cys Thr Gly Gly Cys Thr Gly

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/756,071

Input Set : A:\ES.txt  
Output Set: N:\CRF3\01252001\I756071.raw

DATE: 01/25/2001  
TIME: 11:31:44

E--> 1618 705

710

715

720

VERIFICATION SUMMARY DATE: 01/25/2001  
PATENT APPLICATION: US/09/756,071 TIME: 11:31:45

Input Set : A:\ES.txt  
Output Set: N:\CRF3\01252001\I756071.raw

L:28 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]  
L:29 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]  
L:837 M:342 E: Invalid Stop Code On Error, STOP CODON:  
L:878 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:882 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:886 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:890 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:894 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:898 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:902 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:906 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:910 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:914 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:918 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:922 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:926 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:930 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:934 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:938 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:942 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:946 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:950 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:954 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:958 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:962 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:966 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:970 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:974 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:978 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:982 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:986 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:990 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:994 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:998 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:1002 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:1006 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:1010 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:1014 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:1018 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:1022 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:1026 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:1030 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:1034 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:1038 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:1042 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:1046 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:1050 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:1054 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14

VERIFICATION SUMMARY  
PATENT APPLICATION: US/09/756,071

DATE: 01/25/2001  
TIME: 11:31:45

Input Set : A:\ES.txt  
Output Set: N:\CRF3\01252001\I756071.raw

L:1058 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:1062 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:1066 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:1070 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:1074 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14  
L:1403 M:342 E: Invalid Stop Code On Error, STOP CODON:  
L:1618 M:204 E: No. of Bases differ, LENGTH:Input:720 Counted:0 SEQ:20